

Shay Levite

Senior Process & Commissioning Engineer | Water & Wastewater Treatment

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PERSÖNLICHE DATEN / PERSONAL DETAILS

Geburtsdatum / DOB: 24.06.1989
Geburtsort / POB: [Geburtsort einfügen]
Staatsangehörigkeit: Deutsch (German citizen — full EU work authorization)
Familienstand: Verheiratet, 2 Kinder (schulpflichtig) / Married, 2 school-age children
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BERUFSPROFIL / PROFESSIONAL PROFILE

Senior Process & Commissioning Engineer with nearly 7 years of experience in industrial-scale water and wastewater treatment systems. M.Sc. background in water technology combined with hands-on commissioning of biological (MBBR, activated sludge, MBR), membrane (UF/RO/SWRO/EDI), and high-purity water systems up to 700 m³/h. Experienced in pilot design, mass balance validation, hydraulic balancing, FAT/SAT execution, and on-site technical leadership across international industrial projects.

BERUFSERFAHRUNG / PROFESSIONAL EXPERIENCE

Senior Process & Commissioning Engineer

Bluegen Water (GES) — International Industrial Projects | 05/2020 – heute (Present)

Pilot Design & Process Development

- Planned and supervised a down-scaled pilot of the existing full-scale activated sludge MBR process at Bazan Oil Refinery (Haifa) to evaluate the addition of PAC (powdered activated carbon) dosing for TOC removal, and to assess the implications of the modified process on the full-scale plant prior to implementation.
- Developed the pilot test protocol, oversaw operational data collection, and analyzed performance against the baseline full-scale process to support the design decision.

Technical Leadership & Field Coordination

- Provided technical direction to a field team comprising a process engineer, laboratory technician, and plant operators during long-term operation of a refinery wastewater reuse facility (450–700 m³/h secondary effluent, 60% recovery).
- Coordinated across process engineering, instrumentation, PLC/SCADA, and client technical representatives across multiple international project deployments.
- Prepare regular plant-performance reports for clients, documenting operational KPIs (flow, recovery, removal efficiencies, consumables) and corrective actions taken.
- Prepare effluent quality reports for the relevant regulatory authorities, ensuring compliance with discharge permits and providing the evidentiary basis for ongoing operating approval.

Key Commissioning Projects

- 250 m³/h industrial WWTP — petrochemical sector: full commissioning of the plant, which includes an MBBR biological stage; covered hydraulic balancing, biological stabilization, and complete plant mass balance validation.
- Refinery wastewater reuse facility: process engineering for treatment of 450–700 m³/h secondary effluent at 60% recovery.

- 3 × 72 m³/h high-purity water production lines: executed FAT (Factory Acceptance Test) and SAT (Site Acceptance Test) protocols as part of commissioning; improved overall recovery from 70% to 75% through systematic parameter testing and process adjustment.
- 600 m³/day SWRO desalination facility: commissioning for potable water production.
- 50 m³/h groundwater remediation facility achieving VOC compliance per applicable standards.
- Participated in commissioning of 6 industrial-scale treatment facilities across diverse technology platforms (biological, membrane, ion exchange, advanced oxidation).

Digital Tools & AI-Assisted Engineering

- Developed an AI-assisted reporting workflow using Claude Code, enabling production of detailed, structured engineering reports in minutes rather than hours; substantially improved documentation quality and consistency.
- Use Anthropic's Cowork tool to automate file management, structured data extraction from operational logs, and routine engineering document preparation — freeing engineering time for site work and analysis.

KI-GESTÜTZTE INGENIEURARBEIT / AI-ASSISTED ENGINEERING & "VIBE CODING"

Beyond traditional process engineering, I have developed a working competency in AI-assisted engineering — what is colloquially termed "vibe coding" — using natural-language tools (Claude Code, Anthropic Cowork, and the Claude desktop and chat interfaces) to produce engineering software, scripts, and structured documentation without writing code line-by-line manually. This combines domain expertise (water treatment, mass balance, P&ID logic) with AI-driven implementation speed.

Tools & Platforms

- Claude Code — terminal-based AI coding agent for generating Python/JavaScript scripts, data parsers, calculation tools, and report generators.
- Anthropic Cowork — desktop AI assistant for automating file organization, document preparation, and routine office workflows for non-developers.
- Claude (web/desktop) — for engineering analysis, troubleshooting reasoning, regulatory compliance research, and document drafting.

Practical Applications in Engineering Workflows

- Automated generation of structured commissioning and start-up reports from raw operational logs, reducing report turnaround from hours to minutes.
- Built calculation tools for mass balance validation, hydraulic balancing checks, and recovery rate analysis without traditional software development cycles.
- Extracted, cleaned, and analyzed operational data (PLC exports, lab results, daily logs) using AI-generated Python scripts.
- Drafted standardized P&ID review checklists, FAT/SAT protocols, and HAZOP documentation templates.
- Maintained version-controlled documentation libraries (CV variants, project reports, technical specifications) using AI-assisted file management.

Implications for the Workplace

- Engineering throughput: routine documentation tasks that traditionally consume 30–40% of an engineer's time can be reduced by an order of magnitude, freeing capacity for site presence, troubleshooting, and design work.
- Knowledge transfer: AI-assisted documentation produces consistent, well-structured handover materials, reducing onboarding time for new team members and improving operator training quality.
- Bridging the engineer-to-software gap: I can build internal tools (data parsers, calculation utilities, report generators) without an IT department, addressing engineering-specific problems that off-the-shelf software does not solve.

- Quality and compliance: structured AI-assisted reporting reduces transcription errors and improves traceability for regulatory submissions and client audits.
- Cost-effective digitalization: small to mid-size engineering teams can adopt AI workflows immediately without large IT investment, making it particularly valuable for utilities, municipal water authorities, and mid-cap industrial operators.

AUSBILDUNG / EDUCATION

M.Sc. Water Technologies

Tel-Hai College, Israel | 2021

Master's Thesis: *Development of a continuous nitrogen fixation fermenter using Azospirillum brasilense bacteria and encapsulation technology for fertilization. Designed and constructed a custom bioreactor (fermenter) from scratch for experimental nitrogen-fixing cultures.*

B.Sc. Water Engineering

Kinneret Academic College, Israel | 2018

Comprehensive program in water resources engineering, hydraulics, water chemistry, treatment process design, and environmental regulation.

FACHKENNTNISSE / TECHNICAL SKILLS

Treatment Technologies

- Biological treatment: MBBR (Moving Bed Biofilm Reactor), activated sludge, MBR (Membrane Bioreactor)
- Membrane systems: Ultrafiltration (UF), Reverse Osmosis (RO), Seawater Reverse Osmosis (SWRO), Electrodionization (EDI)
- DAF (Dissolved Air Flotation), high-purity water systems, ion exchange
- Groundwater remediation (VOC and mercury removal)
- SWRO desalination for potable production

Engineering Methods & Process Skills

- Pilot design and supervised operation
- Commissioning, start-up, FAT and SAT protocols
- Mass balance validation and hydraulic balancing
- Process optimization and operational troubleshooting
- P&ID development, review, and risk assessment / HAZOP participation
- Regulatory compliance (VOC, potable water standards, industrial discharge)

Software & Digital Tools

- PLC interface and SCADA coordination (basic programming, troubleshooting, data extraction)
- MS Office (Word, Excel — including advanced formulas and pivot tables for mass balance work)
- AI-assisted engineering: Claude Code, Anthropic Cowork, Claude desktop/web ("vibe coding")
- Python/JavaScript scripting (AI-assisted) for data processing and report automation
- AutoCAD (basic — P&ID reading and markup)

SPRACHEN / LANGUAGES

Deutsch (German): B1 (BAMF-zertifiziert, aktiv im Ausbau Richtung B2)

English: Professional working proficiency (C1)

Hebrew (עברית): Native (Muttersprache)

ZERTIFIKATE & WEITERBILDUNGEN / CERTIFICATIONS & TRAINING

German Language Course B1

BAMF-recognized integration course (Bundesamt für Migration und Flüchtlinge) | 2026

PLC (Programmable Logic Controllers) — Professional Training

2023

Continuing Professional Development

Ongoing self-directed development in AI-assisted engineering tools (Claude Code, Cowork) and in German technical vocabulary for the water and utilities sector.

INTERESSEN / INTERESTS

Water resources policy and circular-economy applications in industrial water treatment. Family activities with my wife and two school-age children. Outdoor sports and exploring Berlin and the Brandenburg region.

— Master CV / Stammdokument — internal source document for tailored applications —

Berlin, den _____

Unterschrift: _____